

Platelet Rich Plasma Therapy

A close-up photograph of a person's hand holding their knee, which is highlighted with a red glow, indicating pain or injury. The background is dark and out of focus.

Cutting edge therapy to help
heal and regenerate chronic
and acute conditions

SUFFERING FROM INJURIES THAT JUST WON'T HEAL?

If you are one of the many people suffering from pain caused by injured tendons, muscles, ligaments, and joints that heal at a remarkably slow pace or not at all, Platelet Rich Plasma (PRP) Therapy may be the answer you are looking for. PRP can be used to promote healing and can be applied to various musculo-skeletal systems.

HOW PRP WORKS...

PRP injections are prepared from the patient's own blood with strict sterile technique. After being centrifuged, the activated platelets are injected into the abnormal tissue, releasing growth factors that recruit and increase the proliferation of reparative cells. Ultrasound imaging may or may not be used to guide the injection.

DO YOU SUFFER FROM ANY OF THE FOLLOWING CONDITIONS?

- Osteoarthritis of the Knee, Shoulder, Hip and Spine
- Rotator Cuff Tears
- Chronic Plantar Fasciitis
- ACL Injuries
- Pelvic Pain and Instability
- Back and Neck Injuries
- Tennis Elbow
- Ankle Sprains
- Tendinitis
- Ligament Sprains

If so, PRP may help you with your healing process.

HOW PRP HELPS YOUR BODY...

- Healthy and safe healing of bodily injuries is possible with PRP by using the body's own blood supply to promote proper healing.
- The body's first response to soft tissue injury is to deliver platelet cells. Packed with growth and healing factors, platelets initiate repair and attract the critical assistance of stem cells.
- PRP's natural healing process intensifies the body's efforts by delivering a higher concentration of platelets directly into the area in need.
- PRP injected into and around the point of injury, jump-starts and significantly strengthens the healing process.
- Because your own blood is used, there is no risk of a transmissible infection and a low risk of allergic reaction.

WHAT TO EXPECT...

Procedure usually takes about an hour including preparation time. This procedure takes place in a quiet, tranquil medical office setting and relieves the pain of your injuries without the risks associated with surgery, general anesthesia, or recovery. Most people are able return to work and normal activity right after the procedure. Each case varies, but up to 3 injections can be given within a 6 week time frame. Typically three injections are not necessary as people begin to feel considerable relief after one or two.

WHY USE PRP?

When we injure ourselves, one of the first repair cells that travel to the injury are platelets. Platelets are rich in many different growth factors. These growth factors help attract other repair cells (neutrophils, monocytes, fibroblasts). These “worker” cells then allow normal healing to take place.

Unfortunately, our tendons and ligaments have a very poor blood supply which leads to an incomplete or much delayed healing response. With PRP we are helping to bring these natural healing cells to an area that have been deficient; thereby, allowing the body to repair the tissue faster. This leads to much quicker reduction in pain and faster return to sports and daily living activities.



WHO HAS SUCCESSFULLY USED PRP?

Garrett Richards - Los Angeles Angels, shoulder

Stephen Curry - Golden State Warriors, knee

D'Angelo Russell - Los Angeles Lakers, knee

Jerryd Bayless - Philadelphia 76ers, wrist

Travis d'Arnaud - New York Mets, shoulder

Danny Salazar - Cleveland Indians, forearm

Isaiah Thomas - Boston Celtics, groin

Angel Pagan - San Francisco Giants, patella tendinitis

Koji Uehara - Boston Red Sox, pectoral muscle

As well as professional agencies and sports teams such as: **Pittsburgh Steelers, Los Angeles Dodgers, New York Mets, Houston Astros, LA Clippers, Rutgers College, Mayo Clinic, Cleveland Clinic**, and many more.

THE SCIENCE BEHIND PRP THERAPY...

Anterior Cruciate Ligament Grafts With and Without PRP

ACL reconstruction with the use of PRPG achieves complete homogeneous grafts assessed by MRI, in 179 days compared with 369 days for ACL reconstruction without PRPG. (4) This represents a time shortening of 48% with respect to ACL reconstruction without PRPG. (1)

PRP Improves Chronic Tendinosis

PRP may improve tendon injuries as well as other chronic tendinosis. Specifically, it could be possible to treat an acute Achilles tendon tear non-operatively using a PRP injection. (2)

Non-surgical, ultrasound guided injection of PRP into the Achilles tendon within one month of injury, significantly improved a 90% Achilles tendon rupture in 6 weeks, leaving only a small focal tear. At 24 weeks, the tear was completely resolved. (3)

PRP More Effective for Treatment of Chronic Hip Bursitis Than Cortisone

40 patients with chronic hip bursitis, who had at least 6 months of failed traditional nonoperative treatment, were randomized into two groups. Patients in the first group were treated with a 40-mg injection of methylprednisolone, and the second group of patients received a single injection of autologous PRP. Platelet-rich plasma showed clinical superiority over cortisone for patients receiving treatment for chronic hip bursitis. (7)

PRP Provides Extended Relief of Knee Pain in Patients with Early Onset Arthritis

93 patients with early onset arthritis were given a series of 3 PRP injections. There was significant reduction in pain and improvement in function up to 12 months after the injections and further improvement at 18 months by annual repetition of the treatment. (8)

PRP for Hip Injury

In this study, a case study of a 27-year-old professional soccer player, was published in the official journal of the ESSKA, the European Society for Sports Traumatology, Knee Surgery and Arthroscopy. The patient, who had experienced damage to his hip capsule (heterotopic ossification), was treated with a combination of platelet-rich plasma and bone marrow aspirate concentrate.

Following these treatments, the patient reported lower pain ratings, his strength improved, and there was less visible evidence of damage on magnetic resonance imaging (MRI) scans. (9)

PRP for Achilles Tendinopathy

Achilles tendinopathy patients that were not responding to previous treatments responded well to PRP injections. For this study, conducted at Rizzoli Orthopaedic Institute in Italy, scientists looked at 27 patients suffering from Achilles tendinopathy injuries (tendinitis or tendinosis) that were not responding to previous treatments.

Two of the standard rating systems used by researchers revealed “a significant improvement” and “a similar positive trend,” according to the study, which concluded that “PRP injections produced good overall results for the treatment... with a stable outcome up to a medium-term follow-up.” In other words, their findings were consistently positive for patients who were analyzed long-term, for 4 ½ years. (10)

PRP vs. Corticosteroid Injections for Tennis Elbow

Nearly half the patients treated with the corticosteroid injection experienced re-emerging symptoms by the six-month check up. For a study by researchers at Maulana Azad Medical College in India, 30 participants were divided into groups to be injected either with platelet-rich plasma or corticosteroid. These were patients who were suffering from stubborn cases of tennis elbow. When these two groups were assessed for no less than five commonly accepted measurements of pain and functionality – including ones created at Oxford University and the Mayo Clinic – all patients (in both groups) saw improvements with each of the five metrics at six months. (11)

The patients in the PRP group saw better continuing improvement, though. Researchers reported that 46.7% of corticosteroid recipients had their best ratings at the three-month point; those patients' symptoms started to re-emerge by the six-month checkup.

BACK TO NORMAL RELIEF FROM YOUR PAIN IS POSSIBLE!

Activated platelets provide much needed growth factors that encourage the healing of old tissues and the creation of newer and healthier muscle and bone cells. Platelet-rich plasma therapy provides fast, effective, and sustainable results in reducing pain and giving the body the capability to heal itself. Not only does it address pain at its source, it gives it the tools it needs to complete the healing process.

Research studies and clinical practice have shown PRP therapy to be very effective at relieving pain and returning patients to their normal lives. Both ultrasound and MRI images have shown definitive tissue repair after PRP therapy, confirming the healing process. The need for surgery can also be greatly reduced by treating injured tissues before the damage progresses and the condition is irreversible.

FREQUENTLY ASKED QUESTIONS

Will the injection hurt?

While the provider does everything they can to make the injection as comfortable as possible there will be a small amount of discomfort.

What's included in the cost of treatment?

- 1) Comprehensive evaluation by a family nurse practitioner.
- 2) Digital x-rays of the affected joint(s)
- 3) Three PRP injections performed via ultrasound guidance.
- 4) One on one physical therapy with a Doctor of Physical Therapy.

How much does PRP cost?

A single area is (e.g. knee, shoulder or lower back) is \$1500 and includes all of the above services. Each additional area, when included with the initial evaluation are only \$500.

Does Insurance Cover PRP Injections?

All health insurances are different. If you are considering treatment with PRP, be sure to check your eligibility with your health insurance carrier. Our staff is happy to help you determine if your policy covers PRP therapy.

How do I prepare for an injection?

- 1) Be sure to be well hydrated.
- 2) Avoid Non-Steroidal Anti-Inflammatories (NSAIDs) the day of procedure.
- 3) Wear loose fitting clothing that allows access to the area to be injected.

Platelet Rich Plasma After Care Instructions

- 1) It is common to feel some pain and discomfort for 24-48 hours after injection. After the first 2-3 days, the soreness will start to subside, it is important to listen to your body.
- 2) If you have had your shoulder or elbow injected, you need to wear your arm in a sling for at least 2 days and up to a week if needed for comfort.
- 3) If you have had your knee injected, you need to rest for 24 hours, then resume activity as tolerated, avoid any jumping or running for at least 2 weeks.
- 4) If you have had your foot injected, you will need to wear the walking boot provided to you for 2 weeks.
- 5) Please use caution with activity. You should use PAIN as your guideline and limit activity early on in your recovery. Get up and walk frequently. “MOTION IS LOTION!”
- 6) **Do not use the following medication:** Aspirin, Salsalate (amigesic), Celecoxib (celebrex), Diclofenac (voltage), Etodolac (Iodine), ibuprofen (motrin), Indomethacin (indocin), Ketoprofen (orudis), Ketorolac (Toradol), Nabumetone (Relafen), Naproxen (Aleve, Naprosyn), Oxaprozin (Daypro)
or supplements: Bromelain, Capsicum, Cat’s claw (Uncaria tomentosa), Evening primrose (Onagraceae), Fish oil, Tumeric (Curcuma longa), Ginger, Green tea extract, Cod oil, Curcumin for 7 days after the procedure.
- 7) You may use topical pain cream and ice to control pain.

#1 Rule of Recovery is: If it hurts... DON'T do it!

- 1) Radice F, et al, Comparison of Magnetic Resonance Imaging Findings in Anterior Cruciate Ligament Grafts with and without Autologous Platelet-derived Growth Factors, *The Journal of Arthroscopic and Related Surgery* 26, issue 1, 2010;50-57.
- (2) Mishra, et al, Treatment of Tendon and Muscle Using Platelet-Rich Plasma, *Clin Sports Med* 28, 2009;113-125.
- (3) Steven Sampson, et al, Platelet-rich Plasma Therapy as a first-line Treatment for severe Achilles Tendon Tear: a case report, *International Journal of Therapy and Rehabilitation* 18, 2011;101-106.
- (4) Wellington K, et al, Platelet-rich Plasma in Orthopaedic Applications: Evidence-based Recommendations for Treatment, *J Am Acad Orthop Surg* 21, 2013;739-748.
- (7) Monto RR. Paper #778. Presented at: American Academy of Orthopaedic Surgeons Annual Meeting; March 11-15, 2014; New Orleans.
- (8) Gobbi, A., Lad, D. & Karnatzikos, G. *Knee Surg Sports Traumatol Arthrosc* (2015) 23: 2170.
- (9) Knee Surgery, Sports Traumatology, Arthroscopy, <http://www.ncbi.nlm.nih.gov/pubmed/23052123>
- (10) <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4212034/>
- (11) *Journal of Orthopaedic Surgery*, <http://www.josonline.org/pdf/v23i1p1.pdf01>



During the past several years, much has been written about a therapy called **Platelet-Rich Plasma (PRP)** and its potential effectiveness in the treatment of injuries.

Many famous athletes — Tiger Woods, tennis star Rafael Nadal, and several others — have received PRP for various problems, such as sprained knees and chronic tendon injuries. These types of conditions have typically been treated with medications, physical therapy, or even surgery. Some athletes have credited PRP with their being able to return more quickly to competition.

Even though PRP has received extensive publicity, there are still lingering questions about it, such as:

- What exactly is platelet-rich plasma?
- How does it work?
- What conditions are being treated with PRP?
- Is PRP treatment effective?

This booklet will answer your questions about PRP and if you have more... schedule a **FREE Consultation** with our office!